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INTRAPSYCHIC AND SOCIODEMOGRAPHIC CORRELATES OF THE QUALITY OF LIFE IN MOTHERS OF CHILDREN WITH MOTORIC DISABILITY OF NEUROLOGIC ETIOLOGY

Abstract

This article gives the description of subjective sense of quality of life and its intrapsychic correlates in 31 randomly chosen mothers of children with motor disability and who constantly receive rehabilitation and therapeutic support in Specialised Psychological and Pedagogic Guidance Service in Skawina and Malopolska Centre of Rehabilitation in Radziszów. The following variables: Big Five personality traits, a sense of alienation, stress management style, an evaluation of resources, socio-demographic variables (sex, age, place of living, family standard of living) and basic information on health of the child with motor disability have been tested in relation to sense of quality of life in the research group.

The statistically significant correlation between socio-demographic as well as related to health of the child variables and the sense of quality of life of the mothers has not been proved. Yet statistically significant correlation between the sense of quality of life in the mothers and their chosen personality traits (neuroticism, openess, conscientiousness) as well as the sense of alienation has been found. Also the relation between stress management and coping strategies (assertive activities, searching for social support) and the sense of quality of life has been proved.

Key words: subjective sense of quality of life mothers of children with motor disability

Intrapsychiczne oraz socjodemograficzne korelaty jakości życia matek dzieci z niepełnosprawnością ruchową o etiologii neurologicznej

Streszczenie

W artykule dokonano charakterystyki subiektywnego poczucia jakości życia oraz jego intrapsychicznych korelatów u 31 losowo wybranych matek dzieci z niepełnosprawnością ruchową, korzystających ze stałego wsparcia terapeutycznego i rehabilitacyjnego w Specjalistycznej Poradni Psychologiczno-Pedagogicznej w Skawinie oraz Małopolskim Centrum Rehabilitacji Dzieci w Radziszowie. Zmienne, których związek został zweryfikowany w relacji do poczucia jakości życia, to: cechy osobowości w ujęciu modelu Wielkiej Piątki, poczucie alienacji, ocena zasobów, zmienne socjodemograficzne (płeć, wiek, miejsce zamieszkania), status rodziny, a także zasadnicze informacje o stanie zdrowia dziecka z niepełnosprawnością ruchową.

Nie potwierdzono, by zmienne socjodemograficzne oraz zmienne związane ze stanem zdrowia dziecka w sposób istotny statystycznie korelowały z poczuciem jakości życia ich matek. Analizy statystyczne wykazały natomiast istotne korelacje pomiędzy poczuciem jakości życia matek a wybranymi cechami ich osobowości (neurotyczność, otwartość, sumienność) oraz poczuciem alienacji. Uzyskano również potwierdzenie związku strategii radzenia sobie w sytuacjach trudnych (działania asertywne, poszukiwanie wsparcia społecznego) z poczuciem jakości życia.

Słowa kluczowe: subiektywne poczucie jakości życia matek dzieci z niepełnosprawnością ruchową

Introduction

The study presented in the article adheres to the quality of life theory propounded by R.L. Schalock (2000) and R.A. Cummins (2005, 2007) and to S. Hobfoll's (2006) conservation of resources theory, both interpreted in the light of the contemporary understanding of resilience with particular emphasis on flexible coping skills, competences necessary for good functioning despite adversity, resilience defined not as an individual resource but as an individual characteristic (Fredrikson, 2001; Smith, 2009; Luthar, Zelazo, 2003; Heszen, Sęk, 2007; Hee Lee et al., 2013; Ogińska-Bulik, 2014a; Ostrowski, 2014; Sikorska, 2014) and the systemic approach to family functioning (Olson et al., 1979; Margasiński, 2011; Plopa, 2011). The article also draws upon the sense of alienation theory propounded by B. Kmiecik-Baran (1995). The concept of alienation provoked both subjective and objective interpretations. The theory in question propounds that the areas which prove significant to individuals and can become alien to them include: the principles of social interaction, values, personal opinions and beliefs, individual behaviours and other people.

The description of mothers who raise a child with neurologically based motor impairment adheres to the paradigm which draws upon the chronic illness

in children model propounded by K. Lemanek (1994) and developed further by W. Pilecka (2007). The paradigm, which serves as a theoretical basis for the outcomes presented in the study, adheres to the systemic approach to individuals and their environment. The chronic illness of a child and the consequences thereof are considered to be stressors to which both the child and his or her immediate environment gradually adjust.

The descriptions of both the *chronically ill child's ecosystem* (Pilecka, 2002, p. 37) and the concept of the parents living through their child's chronic illness were based on W. Pilecka's insights (Pilecka, 2002, 2007). The perspective adopted in the study allows one to identify developmental factors conducive to the process of alleviating children's suffering; and to include both various theoretical models of chronic illness in children and the process of adjusting to its symptoms, with particular emphasis on systemic ecological theories (Olson et al., 1979; Thompson, Gustafson, 1996).

The attempt to operationalise the concept of neurologically based motor impairment in children and its development examines the issue from the perspective presented by M. Kaciński (2007) and M.M. Jan (2012).

Literature on the psychological aspects of living through impairment in the family points out that the functioning of a family with a disabled child and the responses of the parents depend on their age, gender and personality, their dominant ways of coping with stress, their existing resources as well as the child's age and the time which has elapsed since the diagnosis. The factors presented above were included in statistical analyses with the aim of presenting the fullest possible model of potential correlations between variables.

Methodology

Problem and Hypotheses

The aim of the study was to identify whether a correlation exists between the subjective sense of the quality of life in mothers who raise a child with neurologically based motor impairment and their personality structure, declared sense of alienation, sense of the conservation of resources and selected demographic variables.

Variables analysed in the study and measurement methods are presented in Table 1.

Table 1. Variables Analysed in the Study and Measurement Methods

Dependent variable		Independent variable	
Variable	**Measurement method**	**Variable**	**Measurement method**
Sense of the quality of life	WHOQOL-BREF Questionnaire	**Sociodemographic variable and the child's health**	Demographics
		Personality structure	P. Costa and R. McCrae NEO FFI
		Sense of alienation	B. Kmiecik-Baran Sense of Alienation Scale
		Sense of the conservation of resources	S. Hobfoll Conservation of Resources Questionnaire

Source: Authors' research.

Psychological Variables Measurement Techniques Description

1. WHOQOL-BREF Questionnaire is a method which studies subjective life quality levels. The questionnaire consists of twenty-six questions. Respondents provide answers on the five-point scale. The questionnaire allows the identification of global life quality levels by addressing a variety of individual functioning aspects in the following four areas: physical health/satisfaction, psychological health/satisfaction, social relationships and environment.

Values obtained in the above areas are calculated using a selected algorithm, and they range from 4 to 20 points. The higher the obtained value is, the higher life quality levels it entails (Noerholm et al., 2004). Reliability, which was measured with Cronbach's coefficient alpha, ranges from 0.54 to 0.91 for all of the areas while reaching the following values for the entire scale: 0.92 (healthy individuals) and 0.95 (ill individuals). Additionally, single questions measure the following: life satisfaction, health satisfaction (WHO, 2015).

2. The demographics was developed as a survey composed of open and closed questions. The aim of the survey was to obtain social and demographic information (gender, age, residence, family status and structure) and health data concerning children (type of disability, place of therapy, coincident disability, coincident illnesses).
3. NEO FFI is based on the Big Five personality model by P. Costa and R. McCrae (see McCrae, John, 1992), which encompasses the following five factors: Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism (Zawadzki et al., 1998).
4. B. Kmiecik-Baran Sense of Alienation Scale – the method is based on Seeman's alienation concept. Five different alienation types were identified.

Kmiecik- Baran supplemented the above type with their opposing counterparts 1995). Apart from general outcomes, the measurement also identifies five alienation dimensions on the following scale: Sense of anomie/social order, Sense of meaninglessness/meaningfulness, Sense of helplessness/resourcefulness, Sense of self-alienation/autonomy, Sense of isolation/integration.

The questionnaire consists of 100 items. Each of the alienation types is measured with 20 items: 10 positive and 10 negative, respectively. Respondents complete all the items on the five-point scale.

The Alienation Scale's reliability is rtt = 0.8, while reliability for each of the respective dimensions is: rtt = 0.98, rtt = 0.96, rtt = 0.94, rtt = 0.28, rtt = 0.97.

5. S. Hobfoll Conservation of Resources Questionnaire is based on Hobfoll's Conservation of Resources Theory (Hobfoll, 2006). It serves as a method for resource management measurement (74 different resources). Each of the resources is subsumed under one of the following four categories: Material resources, Subjective resources, Energy resources, Status resources.

The questionnaire survey proceeds in three stages. The initial stage measures the significance of each resource. The second stage examines the extent to which individuals have gained these resources in their lives, whereas the final stage examines their respective losses.

The outcomes illustrate the global significance individuals attach to each of the 74 different resources, and the global significance they attach to their respective gains or losses. The analysis sheds light on the significance of each resource category (material, subjective, energy and condition resources) as well as the significance of their respective gains and losses (Bartczuk, 2010). Gain and loss volumes were calculated with specific algorithms (Dudek et al., 2007). Reliability was tested with Cronbach's coefficient alpha and gave the following results: 0.97 (resource significance), 0.98 (resource gain), 0.98 (resource loss) (Bartczuk, 2010).

The following research hypotheses were formulated using research questions based on the theoretical tenets adopted in the study:

Hypothesis 1: A correlation exists between the individual perception of the quality of life and health and their respective domains in mothers who raise a child with neurologically based motor impairment, and sociodemographic variables.

Justification

The subjective sense of the quality of life is largely conditioned by sociodemographic variables. This was demonstrated by Użyńska et al. (2009, p. 59) Rentinck et al. (2006) and other researchers (Ong et al., 1998; Wiegner, Donders, 2000).

Hypothesis 2: A correlation exists between the individual perception of the quality of life and health and their respective domains in the mothers involved in the study and the health of their children.

Justification

The child's illness alters the sense of the quality of life in his or her parents by bringing new circumstances to their lives. The following term is then used in medicine: "the quality of life is conditioned by illness or impairment." The definition focuses on the functional impact of both the illness and the rehabilitation process on the child and the family. The hypothesis finds evidence in a number of studies (Użyńska et al., 2009; Rentinck et al., 2006; Wiegner, Donders; 2000; Weinhouse et al., 1992).

Hypothesis 3: A correlation exists between the sense of the quality of life and health and their respective domains in mothers who raise a child with neurologically based motor impairment and their personality structure.

Detailed hypotheses

Hypothesis 3.1. The higher the agreeableness in mothers who raise a child with neurologically based motor impairment, the higher their individual perception of the quality of life and health.

Hypothesis 3.2. The higher the level of openness to new experiences in the mothers involved in the study, the higher their individual perception of the quality of life and health.

Hypothesis 3.3. The higher the level of neuroticism in the mothers involved in the study, the lower their individual perception of the quality of life and health.

Justification

Numerous researchers consider personality factors to be significant determiners of life satisfaction, both in healthy individuals and persons with disability (Trzebiatowski, 2011; Zawiślak, 2006; Cummins, 2005; Ignatowicz, 2001).

Hypothesis 4: A correlation exists between the individual perception of the quality of life and health and their respective domains in mothers who raise a child with neurologically based motor impairment, and their sense of alienation levels.

Detailed hypotheses:

Hypothesis 4.1. The lower the individual perception of the quality of life in mothers who raise a child with neurologically based motor impairment, the higher their sense of anomie, meaninglessness, helplessness, self-alienation and isolation.

Hypothesis 4.2. The lower the overall perception of health in mothers who raise a child with neurologically based motor impairment, the higher their sense of anomie, meaninglessness, helplessness, self-alienation and isolation.

Justification

A number of research outcomes demonstrate that social support is an important correlate for the quality of life (Trzebiatowski, 2011; Rentinck et al., 2006).

Hypothesis 5: A correlation exists between the individual perception of the quality of life and health and their respective domains in mothers who raise a child with neurologically based motor impairment and the significance they attach to their particular resources and their sense of gain or loss.

Detailed hypotheses

Hypothesis 5.1. The higher the sense of loss in particular resources, including material, subjective, status and energy resources, in mothers who raise a child with neurologically based motor impairment, the lower their individual perception of the quality of life and its respective domains.

Hypothesis 5.2. The higher the overall sense of loss in particular resources, including material, subjective, status or energy resources, in mothers who raise a child with neurologically based motor impairment, the lower their individual perception of the quality of life and its respective domains.

Hypothesis 5.3. The higher the overall sense of gain in particular resources, including material, subjective, status or energy resources, in mothers who raise a child with neurologically based motor impairment, the higher their individual perception of the quality of life and its respective domains.

Hypothesis 5.4. The higher the overall sense of gain in particular resources, including material, subjective, status or energy resources, in mothers who raise a child with neurologically based motor impairment, the higher their individual perception of the quality of life and its respective domains.

Justification

It is believed that resources, both economic and personal, fail to directly condition the quality of life. However, they are both considered to be factors leading to happiness (Bańka, 2005). Resources allow individuals to satisfy their social, emotional or self-actualisation needs, which results in higher life satisfaction levels (Baumann, 2006).

Relevant research outcomes demonstrate a correlation between internal resources, a sense of well-being and the adjustment to the role of a parent (Rentinck et al., 2006). Other researches also analyse how the incidence of stress is influenced by hope (Horton-Vensters, Wallander, 2001) and present aspects such as self-esteem and self-control, in parents with healthy children and with disabled children, respectively (Sikorska, 2014; Rentinck et al., 2006; Lin, 2000).

In order to verify the adopted research hypotheses, the study involved a group of randomly selected 31 women: mothers who raise a disabled child without coincident illnesses (n = 19); mothers who raise a disabled child diagnosed with

coincident illnesses (n = 12) between 27 and 72 years of age (42 years on average, standard deviation: 18.2). As regards the type of families involved in the study, it was established that 25 and 6 families were two- and single-parent families, respectively. 6 respondents came from rural areas, towns up to 10 thousand inhabitants and cities over 100 thousand inhabitants, respectively. The largest group involved in the study lived in towns of up to 40 thousand inhabitants (12 respondents), and only one person lived in the city up to 100 thousand inhabitants. The study utilised an auditorium questionnaire and was carried out from January to July 2013.

Methods for Statistical Data Analysis

The study provided quantitative data obtained with questionnaires such as WHOQOL-BREF, NEO-FFI (Zawadzki et al., 1998), Sense of Alienation Scale (Kmiecik-Baran, 1995), Sense of the Conservation of Resources Questionnaire. The survey (personal data form) developed for the purpose of the study produced both quantitative and qualitative data.

At test for unrelated or independent groups was carried out in order to compare the sense of the quality of life in mothers raising either a daughter or a son with neurologically based motor impairment, in mothers raising a child with a coincident illness and without it, and between members of the respective types of families involved in the study (two-parent and single parent families).

A single factor variation analysis was carried out in order to compare the sense of the quality of life in groups according to their place of residence. Pearson's linear correlation coefficient was in turn the last statistical method used in the analysis. The analysis was completed with SPSS Statistics 17.0.

Correlation between the quality of life and sociodemographic variables in the group involved in the study

The analysis of the types of families involved in the study established no significant differences between the quality of life in two- and single-parent families. Likewise, the variation analysis demonstrated no statistically significant differences between the inhabitants of rural and urban areas, the latter's size notwithstanding. The correlation between the sense of the quality of life in the mothers involved in the study and their age demonstrated no significance, either. The only statistically significant correlation was discovered between the child's age and the selected quality of life domains in the mother. As illustrated in Table 2, the age of the child significantly correlates with the mother's physical satisfaction, and moderately correlates with her social satisfaction. It was also established that the older the children with motor impairment are, regardless of whether they are sons or daughters, the happier their mothers become physically and socially.

Table 2. Correlation Between the Sense of the Quality of Life in Mothers Raising a Child with Neurologically Based Motor Impairment and the Age of the Child (Pearson's R Two--Tailed Correlation, $n = 31$)

Variable			Child's age	
			M	*SD*
			12.5	6.2
Life satisfaction	*M*	3.129	0.176 ($p = 0.344$)	
	SD	0.659		
Health satisfaction	*M*	3.193	0.208 ($p = 0.261$)	
	SD	0.906		
Physical satisfaction	*M*	21.064	**0.523** (**$p = 0.003$**)	
	SD	2.393		
Psychological satisfaction	*M*	17.865	0.317 ($p = 0.082$)	
	SD	2.088		
Social satisfaction	*M*	10.741	**0.360** (**$p = 0.047$**)	
	SD	1.788		
Environmental satisfaction	*M*	23.322	0.104 ($p = 0.577$)	
	SD	3.409		

Source: Authors' research.

Correlation between the Sense of the Quality of Life in Parents Raising a Child with Neurologically Based Motor Impairment and the Child's Health

The child's health was described according to the answers provided by the mother in the personal data form. The questions investigated the coincidence of other types of disability (mental disability, visual or auditory impairment) and illnesses (e.g. epilepsy, asthma, allergy, reflux or atopic dermatitis) in children. Finally, the analysis took into account only those mothers who raise a disabled child with coincident illnesses in order to examine their sense of the quality of life with parents who raise a disabled child without coincident illnesses. Social satisfaction turned out to be the only variable which correlated with the quality of life (df = 29; $t = –2.164$; $p = 0.039$). The results of the analysis allow for a conclusion that mothers who raise a disabled child without coincident illnesses ($n = 19$; $M = 11.2632$; $SD = 1.52177$) demonstrate higher levels of social satisfaction than mothers who raise a disabled child diagnosed with coincident illnesses ($n = 12$; $M = 9.9167$; $SD = 1.92865$).

Correlations Between the Quality of Life and Personality Traits in Parents who Raise a Child with Neurologically Based Motor Impairment

Pearson's correlation coefficient was used to identify significant correlation between the sense of the quality of life and personality structure in the parents involved in the study. A one-tailed test was used to verify directional hypotheses concerning the positive correlation between the high agreeableness, together with openness to new experiences, and the sense of the quality of life; and the negative correlation between neuroticism and the sense of the quality of life. A statistically significant, negative and moderate correlation was established between life satisfaction and health satisfaction. Neuroticism demonstrates a significant and negative correlation with physical and social satisfaction, and a moderate correlation with environmental satisfaction. The agreeableness shows no significant correlation with satisfaction in any of the identified domains, but openness to new experiences shows a significant correlation with social and environmental satisfaction. Thus, a tentative conclusion can be made that the higher the neuroticism in mothers is, the lower their life and satisfaction becomes, together with their physical. social and environmental satisfaction. The higher their openness to new experiences, the higher their social and environmental satisfaction. A detailed presentation of the results can be found in Table 3.

It was established that conscientioussness correlates with social satisfaction in a manner that is both moderate and positively significant. Extroversion in turn correlates with life satisfaction and physical, social and environmental satisfaction. The higher the conscientioussness is, the higher the physical satisfaction becomes, and the higher the extroversion, the higher the life satisfaction and physical, social and environmental satisfaction. Other correlations proved insignificant.

Correlations between the quality of life and the sense of alienation in parents who raise a child with neurologically based motor impairment

A significant negative correlation was established between satisfaction with each of the examined domains and the sense of alienation. Physical satisfaction highly correlates with four different sense of alienation scales: general scale, sense of meaninglessness/meaningfulness scale, sense of helplessness/resourcefulness and sense of self-alienation/autonomy, and it also moderately correlates with the sense of isolation/integration scale. Psychological satisfaction demonstrates a moderate correlation only with the sense of self-alienation/autonomy.

Psychological satisfaction correlates with four different scales: it highly correlates with the general scale and the sense of helplessness/resourcefulness, and moderately correlates with the sense of meaninglessness/meaningfulness scale (together with the sense of self alienation/autonomy scale). Environmental satisfaction moderately correlates with the general sense of alienation and the sense of meaninglessness/meaningfulness (together with the sense of helplessness/resourcefulness).

Table 3. Correlation Between the Sense of the Quality of Life in the Mothers Involved in the Study with Their Selected Personality Traits (Agreeableness, Neuroticism, Openness – Two-Tailed Significance and Conscientioussness, Extroversion – One-Tailed Significance), $n = 31$

Variable			Agreeableness		Neuroticism		Openness		Conscientioussness		Extroversion	
			M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
			29.87	6.097	23.096	8.463	23.097	5.72	33.161	4.648	27.129	6.168
Life satisfaction	***M***	3.129	–0.012 ($p = 0.47$)		**–0.384 ($p = 0.016$)**		0.249 ($p = 0.089$)		0.282 ($p = 0.124$)		**0.488 ($p = 0.005$)**	
	SD	0.659										
Health satisfaction	***M***	3.193	0.275 ($p = 0.275$)		**–0.457 ($p = 0.005$)**		0.220 ($p = 0.017$)		0.189 ($p = 0.308$)		0.334 ($p = 0.066$)	
	SD	0.906										
Physical satisfaction	*M*	21.064	0.300 ($p = 0.051$)		**–0.563 ($p = 0.000$)**		0.055 ($p = 0.383$)		**0.380 ($p = 0.035$)**		**0.537 ($p = 0.002$)**	
	SD	2.393										
Psychological satisfaction	*M*	17.865	–0.044 ($p = 0.407$)		–0.235 ($p = 0.102$)		–0.261 ($p = 0.078$)		0.041 ($p = 0.826$)		0.000 ($p = 0.998$)	
	SD	2.088										
Social satisfaction	*M*	10.741	0.202 ($p = 0.138$)		**–0.547 ($p = 0.001$)**		**0.361 ($p = 0.023$)**		0.322 ($p = 0.077$)		**0.583 ($p = 0.001$)**	
	SD	1.788										
Environmental satisfaction	*M*	23.322	–0.096 ($p = 0.304$)		**–0.303 ($p = 0.049$)**		**0.550 ($p = 0.001$)**		–0.043 ($p = 0.817$)		**0.391 ($p = 0.030$)**	
	SD	3.409										

Source: Authors' research.

Table 4. Correlation Between the Sense of the Quality of Life in Mothers who Raise a Child with Neurologically Based Motor Impairment and Their Sense of Alienation (Pearson's One-Tailed Correlation; $n = 31$)

Variable			Overal sense of alienation		Sense of anomie /social order		Sense of meaninglessness /meaningfulness		Sense of helplessness /resourcefulness		Sense of self-alienation /autonomy		Sense of isolation /integration	
			M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
			210.81	33.12	49.26	8.04	41.65	8.799	42.74	9.93	39.94	9.43	37.19	6.93
Physical satisfaction	*M*	21.06	**–0.641 (*p* = 0.000)**		–0.261 (*p* = 0.078)		**–0.602 (*p* = 0.000)**		**–0.625 (*p* = 0.000)**		**–0.574 (*p* = 0.000)**		**–0.316 (*p* = 0.041)**	
	SD	2.39												
Psychological satisfaction	*M*	17.87	–0.170 (*p* = 0.181)		0.096 0.303		–0.006 (*p* = 0.488)		–0.229 (*p* = 0.108)		**–0.378 (*p* = 0.018)**		–0.076 (*p* = 0.343)	
	SD	2.09												
Social satisfaction	*M*	10.74	**–0.547 (*p* = 0.001)**		–0.269 0.072		**–0.487 (*p* = 0.003)**		**–0.578 (*p* = 0.000)**		**–0.414 (*p* = 0.009)**		–0.287 (*p* = 0.059)	
	SD	1.79												
Environmental satisfaction	*M*	23.32	**–0.385 (*p* = 0.016)**		–0.229 0.107		**–0.329 (*p* = 0.035)**		**–0.444 (*p* = 0.006)**		–0.281 (*p* = 0.063)		–0.137 (*p* = 0.231)	
	SD	3.41												

Source: Authors' research.

Table 5. Correlation Between the Perception of the Quality of Life and Health in Mothers Raising a Child with Neurologically Based Motor Impairment and Their Sense of Alienation (Pearson's R One-Tailed Correlation, $n = 31$)

Variable			Overal sense of alienation		Sense of anomie /social order		Sense of meaninglessness /meaningfulness		Sense of helplessness /resourcefulness		Sense of self-alienation /autonomy		Sense of isolation /integration	
			M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
			210.81	33.12	49.26	8.03	41.65	8.80	42.74	9.93	39.94	9.43	37.19	6.93
Life satisfaction	*M*	3.129	**–0.439 (*p* = 0.007)**		**–0.359 (*p* = 0.024)**		**–0.382 (*p* = 0.017)**		**–0.310 (*p* = 0.045)**		**–0.389 (*p* = 0.015)**		–0.221 (*p* = 0.116)	
	SD	0.659												
Health satisfaction	*M*	3.193	**–0.385 (*p* = 0.016)**		**–0.650 (*p* = 0.000)**		–0.283 (*p* = 0.062)		–0.186 (*p* = 0.158)		–0.111 (*p* = 0.276)		**–0.313 (*p* = 0.043)**	
	SD	0.906												

Source: Authors' research.

Correlations between the quality of life and the sense of the conservation of resources in parents who raise a child with neurologically based motor impairment.

To conclude, the higher the sense of alienation or helplessness in mothers who raise a child with motor impairment, the lower their physical, social and environmental satisfaction. The higher their sense of self-alienation is, the lower their physical, psychological and social satisfaction becomes; and the higher their isolation, the lower their physical satisfaction. The experience of anomie/social order demonstrates no significant correlation with satisfaction in any of the examined domains. Other correlations proved insignificant. A detailed presentation of the results can be found in Table 4.

Except for the isolation/integration scale, life satisfaction demonstrates a significant, negative and moderate correlation with all the sense of alienation scales, namely the general sense of alienation, anomie/social order, meaninglessness/meaningfulness, helplessness/resourcefulness and self-alienation scale. Health satisfaction in turn demonstrates a significant and negative correlation with the general sense of alienation (moderate), the experience of anomie/social order (high) and the experience of isolation/integration (moderate). This allows for a conclusion that while higher life satisfaction levels in the parents involved in the study lead to a lower sense of alienation, anomie, meaninglessness, helplessness and self-alienation, their higher health satisfaction levels lead to a lower sense of alienation, anomie and isolation. A more detailed illustration of the presented analyses can be found in Table 5, which represents other, statistically insignificant correlations.

Hypotheses on the correlations between the sense of the quality of life and the sense of the conservation of resources were divided into two groups: it was assumed that the overall sense of gain and the sense of gain in particular resources positively correlate with the sense of the quality of life, and that the overall sense of loss and the sense of loss in particular resources negatively correlate with the sense of the quality of life.

The overall sense of gain in resources demonstrates a significant and positive correlation with physical, social and environmental satisfaction. The sense of gain in material resources demonstrates a significant correlation with physical and environmental satisfaction. The sense of gain in subjective resources demonstrates a significant and positive correlation with physical, social and environmental satisfaction and the overall life satisfaction. The sense of gain in energy resources fails to significantly correlate with any of the variables related to the sense of the quality of life in the parents involved in the study. The sense of gain in status resources demonstrates a significant yet weak correlation with physical and environmental satisfaction.

The analysis of the overall sense of loss in resources allows for a conclusion that a significant and negative correlation exists between health satisfaction and social satisfaction The sense of loss in material resources demonstrates a negative correlation with life and health satisfaction and with physical and social satisfaction. The sense of gain in subjective resources fails to significantly correlate with any of the sense of the quality of life scales. The sense of loss in energy resources demonstrates a negative correlation with health satisfaction and with social satisfaction.

Table 6. Correlations Between the Quality of Life and the Sense of the Conservation of Resources in Parents Who Raise a Child with Neurologically Based Motor Impairment (Pearson's R One-Tailed Correlation), $n = 31$

Variable			Life satisfaction		Health satisfaction		Physical satisfaction		Psychological satisfaction		Social satisfaction		Environmental satisfaction	
			M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
			3.129	0,659	3.193	0.906	21.064	2.393	17.865	2.088	10.741	1.788	23.322	3.409
Overall gain in resources	*M*	735.58	**0.319 ($p = 0.040$)**		0.077 ($p = 0.340$)		**0.499 ($p = 0.002$)**		0.255 ($p = 0.083$)		**0.337 ($p = 0.032$)**		**0.325 ($p = 0.037$)**	
	SD	269.913												
Overall loss in resources	*M*	580.806	–0.257 ($p = 0.081$)		**–0.469 ($p = 0.004$)**		–0.142 ($p = 0.223$)		–0.075 ($p = 0.344$)		**–0.435 ($p = 0.007$)**		–0.245 ($p = 0.092$)	
	SD	153.182												
Gain in material resources	*M*	102.064	0.280 ($p = 0.063$)		–0.093 ($p = 0.310$)		**0.418 ($p = 0.010$)**		0.255 ($p = 0.083$)		0.256 ($p = 0.082$)		**0.333 ($p = 0.034$)**	
	SD	41.993												
Loss in material resources	*M*	75.129	**–0.422 ($p = 0.009$)**		**–0.345 ($p = 0.029$)**		**–0.338 ($p = 0.031$)**		–0.080 ($p = 0.334$)		**–0.579 ($p = 0.000$)**		–0.215 ($p = 0.123$)	
	SD	21.742												
Gain in subjective resources	*M*	233.871	**0.330 ($p = 0.035$)**		0.131 ($p = 0.241$)		**0.503 ($p = 0.002$)**		0.195 ($p = 0.146$)		**0.510 ($p = 0.002$)**		**0.335 ($p = 0.033$)**	
	SD	89.684												
Loss in subjective resources	*M*	179.612	–0.144 ($p = 0.219$)		–0.224 ($p = 0.113$)		0.049 ($p = 0.397$)		–0.083 ($p = 0.328$)		–0.029 ($p = 0.438$)		–0.250 ($p = 0.087$)	
	SD	66.268												
Gain in energy resources	*M*	146.225	0.253 ($p = 0.085$)		0.009 ($p = 0.481$)		0.278 ($p = 0.065$)		0.220 ($p = 0.117$)		0.113 ($p = 0.272$)		0.210 ($p = 0.129$)	
	SD	51.920												
Loss in energy resources	*M*	143.741	–0.145 ($p = 0.218$)		**–0.546 ($p = 0.001$)**		–0.156 ($p = 0.202$)		–0.041 ($p = 0.414$)		**–0.394 ($p = 0.014$)**		–0.228 ($p = 0.109$)	
	SD	54.004												
Gain in status resources	*M*	253.225	0.296 ($p = 0.053$)		0.116 ($p = 0.268$)		**0.539 ($p = 0.001$)**		0.270 ($p = 0.071$)		0.268 ($p = 0.072$)		**0.310 ($p = 0.045$)**	
	SD	106.704												
Loss in status resources	*M*	180.29	–0.215 ($p = 0.122$)		**–0.338 ($p = 0.032$)**		–0.128 ($p = 0.246$)		–0.004 ($p = 0.492$)		**–0.560 ($p = 0.001$)**		–0.087 ($p = 0.320$)	
	SD	57.708												

Source: Authors' research.

Likewise, the sense of loss in status resources demonstrates a negative and significant correlation with health satisfaction and with social satisfaction.

To summarise, the analysis demonstrates that individuals with higher life satisfaction levels show a higher sense of overall gain in resources, a higher sense of gain in material resources and a lower sense of loss in material resources. The higher the health satisfaction in mothers who raise a disabled child, the lower their overall sense of loss in resources and their sense of loss in material, energy and status resources. The higher the physical satisfaction, the higher the overall sense of gain in resources and the sense of gain in material, subjective and status resources and the lower the sense of loss in material resources. The higher the social satisfaction, the higher the overall sense of gain in resources and the sense of gain in subjective resources and the lower the overall sense of loss in resources and the sense of loss in material, energy and status resources. The higher the environmental satisfaction, the higher the overall sense of gain in resources and the sense of gain in material, subjective and status resources. Psychological satisfaction fails to significantly correlate with any of the variables related to the quality of life. A detailed presentation of the investigated correlations can be found in Table 6.

Interpretation and Discussion of the Results

The analysis of the results obtained in the study allows for a conclusion that while mothers who raise a child with neurologically based motor impairment usually demonstrate moderate life satisfaction levels (64.5%), only 35.5% of them declare to be fully satisfied with their lives. The result illustrates their subjective sense of the quality of life and is probably related to the way they perceive their situation as mothers who raise a disabled child (see Użyńska, 2009). It seems indisputable that the fact that they raise a child, and a disabled child in particular, often precludes the parents involved in the study from meeting their individual needs. The latter's role has been elucidated on by Cummins (2005) and Pilecka (2007). It seems justified to conclude that the sense of deprivation in meeting one's needs may lead to a lower subjective sense of the quality of life and lower life satisfaction levels, which are usually described as moderate or average in a number of empirical studies available.

The analysis of the results calculated per each quality of life domains allows one to conclude that individuals demonstrate higher social satisfaction levels, including both personal and family relationships, social support and sexual activity. The results obtained in the study confirm the observations made by Nordenfel (see Trzebiatowski, 2011) as well as Cummins (2005), Hobfoll (2006) and Pisula (2007), who emphasised in their theories the importance of social relationships for the quality of life and life satisfaction. It seems that high scores in this area are conditioned by the fact that mothers with disabled children seek support, advice and understanding in other mothers, which is typical of women and has

been confirmed by relevant studies to date (Rentinck et al., 2006). The authors' own research (Makiełło-Jarża, Gerc, 1998; Gerc, 2008; Gerc, 2009); confirms the fact that individuals seek social and emotional support and advice when in adversity (Hobfoll, 2006; Ignatowicz, 2001). It is also worth pointing out that the results obtained with the Sense of Alienation Scale failed to confirm the observation shared by a number of researchers who claim that mothers raising a child with motor disability feel isolated in society (Rentinck et al., 2006). It is possible to offer an interpretation whereby the formerly existing tendencies for isolation (Sikorska, 2014; Lundeby, Tøssebro, 2008) or failing to inform friends about the child's illness or disability are now becoming much less frequent. The relatively favourable situation of the families who raise a disabled child and their relatively good functioning in society can be corroborated by the results obtained with the Behaviour Assessment Questionnaire. The relevant analysis allows for a conclusion that the average sense of overall loss in resources is much lower than the sense of gain in resources, but it still remains higher than the importance attached to these resources. Results of similar kind can be obtained with each of the scale, also in terms of standard deviation. The above conclusions allow for an observation that the majority of the parents avoid falling into Hobfoll's spiral of loss (2006), and the resources which the families possess apparently protect them against losing these very resources, since despite difficulties they face in their lives they still are able to acknowledge an overall gain in resources. The situation of this kind may derive from intraindividual predispositions, but it may just as well stem from the fact that parents can rely on social support, which helps them to appreciate new and hitherto less important aspects in their lives, which in turn has a direct bearing on their sense of gain in particular resources being higher than their respective sense of loss.

The sense of alienation is often directly related to the perception of one's own environment, the outside world and others. The fact that parents achieve good results with this particular scale may ostensibly be in line with their high sense of social satisfaction, which corresponds to the results obtained by B. Kmiecik-Baran (1995). However, she emphasises that individuals may develop a sense of alienation when they are forced to adopt certain behaviours or when they receive little or no social or sensory stimulation (the above). This observation was shared by numerous researchers on resilience, including: K. Strohm (2008), A. Van Breda (2011), G. Peek, B.M. Melnyk (2010), and A. Renzaho et al. (2013).

Literature on the subject (Kmiecik-Baran, 1995) also touches on the issue of self-alienation, which is defined as being estranged from one's ideas and beliefs. The analysis of the results included in the studies presented in the article allows for a conclusion that the higher the self-alienation is, the lower the physical, psychological and social satisfaction becomes. As regards prevention, it seems important to draw the attention of the parents to the role of their personal beliefs in shaping their identity and the importance of leading a life according to one's own values and principles.

Apart from social satisfaction, one of the most important factors that condition life satisfaction is health, which is in line with the medical approach (Użyńska, 2009; Sikorska, 2014). Stress levels in parents are also an important indicator of their health satisfaction. This is corroborated by numerous published researches (Rentinck et al., 2006; Molteno, Lachman 1996; Saddler et al., 1993; Weinhouse et al.,1992) as well as this article, which elucidates on the differences between parents who raise a disabled child with and without coincident illnesses, respectively. A conjecture can be made that being deeply rooted in society and having access to social support may have a soothing effect on the perception of one's health.

The correlation between the higher health satisfaction in the parents involved in the study and their lower sense of the overall loss in resources and their lower sense of loss in material, energy and status resources demonstrates that, when faced with loss, health is a factor extremely sensitive to change in resources. The above results provide an apt illustration to Hobfoll's theory, whereby individuals recognise and experience stress in situations that they interpret as threatening to their resources, as bringing an actual loss in their resources or as precluding any gain as a result of the former investment of the resources (Heszen, Sęk, 2007, p. 147). This also corresponds with the observations presented by A. Van Breda (2011), A. Renzaho et al. (2013), and N. Ogińska-Bulik (2014b).

The economic sphere seems to be of utmost importance to parents who raise a disabled child. The relationship between life satisfaction and the lower sense of loss in material resources in the parents involved in the study probably comes as a result of higher expenditure on physical therapy, medical treatment and adjusting the environment to the needs of their disabled child (Parchomiuk, 2007). The correlation between the sense of the quality of life and the overall value attached to the resources may corroborate the view that the quality of life in parents who raise a disabled child is conditioned by all types of resources, which corresponds with Baumann's (2006) observations.

Physical satisfaction also proves to be an extremely important area. The results obtained in the course of statistical analysis demonstrate that higher physical satisfaction levels correlate with the higher overall sense of gain in resources and the higher sense of gain in material, subjective and status resources and the lower sense of loss in material resources. The correlations presented may find explanation in the fact that physical satisfaction is interconnected with each and every aspect of a human life, with work, leisure, health, energy and mobility. This means that physical satisfaction can be influenced by all the resources which Hobfoll (2006) elucidated on in his theory.

The statistical analysis of the results obtained with the Sense of Alienation Scale and WHOQOL confirmed that the sense of integration, social order, meaningfulness, resourcefulness and autonomy demonstrate a positive correlation with higher life satisfaction levels (see Bańka, 2005).

The results obtained in the study may serve as a basis for a conclusion that the sense of gain in subjective resources, which in turn results is high self-esteem,

sense of hope and self-agency, is an important correlate for life satisfaction (Trzebiatowski, 2011; Ogińska-Bulik, 2014b).

Conclusions

The analysis of the results obtained in the study allows for the following conclusions.

1. Hypothesis 1 concerning the correlation between the individual perception of the quality of life and health and their respective domains in mothers who raise a child with neurologically based motor impairment and sociodemographic variables was confirmed only to a negligible degree. The study failed to demonstrate any statistically significant correlation between the variables included in the hypothesis. The study was only able to demonstrate that the age of the child significantly correlates with the mother's physical satisfaction ($p < 0.01$; $r = 0.523$) and moderately correlates with her social satisfaction ($p < 0.05$; $r = 0.360$).

2. Hypothesis 2 concerning the correlation between the individual perception of the quality of life and health and their respective domains in mothers who raise a child with neurologically based motor impairment and the child's health was confirmed only to a negligible degree. It was confirmed that mothers who raise a disabled child without coincident illnesses demonstrate statistically more significant social satisfaction levels. It was impossible to perform the analysis of other correlations involving the sense of the quality of life in mothers and their child's health due to limited data provided in the demographics.

3. The study confirmed that a statistically significant correlation exists between the personality structure in mothers who raise a child with neurologically based motor impairment and their sense of the quality of life. A conclusion can be made that higher neuroticism levels in mothers lead to their lower life satisfaction and health levels and lower physical. social and environmental satisfaction. Additionally, it can be assumed that the higher the conscientioussness is, the higher the physical satisfaction becomes, and the higher the extroversion, the higher the life satisfaction and physical, social and environmental satisfaction. The only variable which fails to demonstrate any significant correlation is the agreeableness, which is why only Hypothesis 1 proved wrong while other hypotheses were fully confirmed.

4. The statistical analysis confirms that a statistically significant correlation exists between the sense of alienation and the sense of the quality of life in mothers who raise a child with neurologically based motor impairment. It can thus be concluded that while higher life satisfaction levels lead to a lower sense of alienation, anomie, meaninglessness, helplessness and self-alienation, higher health satisfaction levels lead to a lower sense of alienation, anomie and isolation. It is also evident that parents who show high alienation, meaninglessness and helplessness levels demonstrate lower physical, social and environmental satisfaction levels, and the higher their perceived self-alienation, the lower their physical, psychological or social satisfaction. Likewise, the higher their

isolation, the lower their physical satisfaction. The experience of anomie/social order demonstrates no significant correlation with satisfaction in any of the examined domains.

5. The statistical analysis of the results obtained in the study confirms Hypothesis 5 and demonstrates many statistically significant correlations between the sense of the quality of life and the Conservation of Resources Scale. The analysis demonstrates that individuals with higher life satisfaction levels show a higher sense of overall gain in resources and a sense of gain in subjective resources and a lower sense of loss in material resources. Accordingly, the higher the health satisfaction in parents, the lower their overall sense of loss in resources and the sense of loss in material, energy and status resources. It can also be assumed that higher physical satisfaction levels lead to a higher overall sense of gain in resources and a higher sense of gain in material and subjective resources and a lower sense of loss in material resources; likewise, the higher the social satisfaction, the higher the overall sense of gain in resources and the higher the sense of gain in subjective resources and the lower the overall sense of loss in resources and the lower the sense of loss in material, energy and status resources. It is also seems justified to conclude that higher environmental satisfaction levels lead to a higher overall sense of gain in resources and a higher sense of gain in material, subjective and status resources. The statistical analysis also demonstrates that psychological satisfaction in the mothers involved in the study fails to show any statistically significant correlation with the variables related to the quality of life.

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